UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,578	04/18/2005	Yasushi Uchida	123521	1842

25944 7590 08/25/2009

OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER	
KEMMERLE III, RUSSELL J	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
08/25/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,578	UCHIDA ET AL.	
	Examiner	Art Unit	
	RUSSELL J. KEMMERLE III	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9,11 and 13-18* is/are pending in the application.

4a) Of the above claim(s) *13-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9,11,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07 August 2009 has been entered.

Double Patenting

Claims 9 and 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7 and 9 of copending Application No. 10/531,873. This rejection was first made in the non-final Office action dated 20 September 2007, and having not been addressed by the Applicant is maintained.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

Claims 9, 11, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beall (WO 01/16049) in view of Hamaguchi (US Patent 5,069,697).

Beall discloses a method of forming a ceramic honeycomb body involving kneading a mixture of magnesium oxide, aluminum oxide and silicon oxide (i.e., an aggregate particle material), with an organic binder system including water. This mixture is then formed into a honeycomb shaped green body, dried and fired (the firing process would inherently involve also calcining the body since it is fired at a temperature above the calcining temperature of such a body) (claim 1).

Beall further discloses that the silica could be in the form of colloidal silica (page 8 lines 8-9) and be in an amount of at least 5% by weight of the inorganic raw material mixture (aggregate particle material) (that is, the colloidal particles are added in proportion to the amount of aggregate material) (claim 4).

Beall does not specifically disclose an additive put in for the purpose of forming pores having a composition different than the organic binder.

Hamaguchi discloses a method of making a porous ceramic honeycomb filter that is substantially similar to the process of Beall as discussed above. Hamaguchi further discloses that the composition which is extruded into a honeycomb shape in clued a pore forming agent (Col 3 line 34 – Col 4 line 10).

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have modified the method of Beall as discussed above by adding a pore forming agent as taught by Hamaguchi (specifically graphite). This would have been obvious because a dedicated pore forming agent would allow for the greater control of both the total amount of porosity in the finished article, as well as the size of those pores. This would be desirable both as a way of creating articles matching

desired specifications, as well as creating articles that maintain consistency throughout the batch.

While Beall teaches that the silica (colloidal particles) are added before the binder and water, compared to the current invention where that order is switched (binder and water added to ceramic, then colloidal particles added) such a difference would have been obvious to one skilled in the art. Absent a showing of new or unexpected results the selection of any order of mixing ingredients is *prima facie* obvious. The materials can be added in any order and the resulting mixture which is then formed and further processed would be the same combination of those materials. *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render *prima facie* obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is *prima facie* obvious.).

Beall includes teachings that the aggregate material include alumina as discussed above. Further, Beall teaches that the mixture created include the aggregate material in an amount of at least 50% by mass (page 9 lines 9-21, based on the amount of additives disclosed being less than 50% by mass).

Referring to claim 11, Beall further discloses adding 0.2-2 parts by weight of sodium stearate (an alkali metal source) based on 100 parts by weight of the aggregate particle material (page 9 lines 17-21).

Referring to claim 17, Beall discloses that a preferred binder is methyl cellulose (page 9 lines 13-16).

Referring to claim 18, Hamaguchi specifically discloses that the pore forming agent be graphite (Col 3 line 34 – Col 4 line 10).

Response to Arguments

Applicant's arguments filed 7 August 2009 have been fully considered but they are not persuasive.

Applicants argue that the definition of aggregate particle material is not an arbitrary definition, And that Beall fails to disclose the criticality of the colloidal particles being added as a separate additive, in proportion to the aggregate particle material. Applicants argue that Beall discloses the addition of a binder system to the raw materials. Applicants argue that Beall discloses that sodium stearate, binder and water are added based on 100 parts of the alumina and silica sources and talc.

Applicants appear to be arguing that because in Beall the alumina and silica (colloidal) are mixed first, and the weight of that mixture is the basis for how the amounts of the remaining additives are reported, that somehow Beall fails to meet the limitations of the current claims.

This is not found to be persuasive because it does not matter how Beall reports or measures the amounts of materials, if the amounts still fall within that of the currently

claimed composition. One would not need to mix the silica in to mixture first to be able to calculate what the amount of each component would be, it would be known before the mixing was started, and does not change the fact that Beall teaches the same combination of materials as that of the current invention.

Applicants argue that Beall does not disclose that the "at least one component is 50% or more of the total mass of the aggregate particle material, where the total mass of the aggregate particle material is 100 parts by mass."

Applicants argue that Beall uses alumina to form cordierite, and thus the aggregate particle mixture can not be considered to be alumina alone.

It is again asserted that the definition of an aggregate particle material is an arbitrary classification. Applicant's assertion that the aggregate particle material of Beall is no more or less arbitrary than the Examiner's classification of just alumina as the aggregate particle material. There is no requirement that the aggregate particle material be anything more than "a ceramic and/or metal". Thus, the alumina (a ceramic) of Beall could be classified as the aggregate particle material, and the remaining materials could be additions to the aggregate particle material which are permitted due to the open nature of claim 9.

Further, the aggregate particle material of current claim 9 as the Applicants wish it to be interpreted appears to be all ceramic or metal particles used form the honeycomb body other than the colloidal particles. Based on this definition, claim 1 of Beall gives the following composition: 11-17 parts MgO and 33-41 parts Al_2O_3 (the 46-

53 parts SiO_2 are not included as that is the colloidal particles). This results in a composition with is well over 50% alumina (the "at least one component").

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUSSELL J. KEMMERLE III whose telephone number is (571)272-6509. The examiner can normally be reached on Monday through Thursday, 7:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/
Supervisory Patent Examiner, Art Unit 1791

/R. J. K./

Examiner, Art Unit 1791